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CENTRAL INTELLIGENCE AGENCY
WASHINGTON, D.C. 20505

17 February 1976

MEMORANDUM FOR: The Director of Central Intelligence

SUBJECT : MILITARY THOUGHT (USSR): The Air Forces in Operations with the Employment of Conventional Means of Destruction

1. The enclosed Intelligence Information Special Report is part of a series now in preparation based on the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal "Military Thought". This article examines aviation capabilities and the problems of allocating air forces in conventional operations in which escalation to nuclear actions is threatened. The author defines the tasks of long range and front aviation, which exceed their capabilities, and recommends changing the relative proportion of types of aviation and determining the relative importance of the tasks they are assigned. The problems of control are examined briefly from the standpoint of maintaining readiness for nuclear actions during a conventional operation. This article appeared in Issue No. 3 (76) for 1965. 50X1-HUM

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2. Because the source of this report is extremely sensitive, this document should be handled on a strict need-to-know basis within recipient agencies. For ease of reference, reports from this publication have been assigned 50X1-HUM

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William E. Nelson
Deputy Director for Operations

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Page 1 of 15 Pages

50X1-HUM

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50X1-HUM

Intelligence Information Special Report

50X1-HUM

COUNTRY USSR

DATE OF INFO. Late 1965

DATE 17 February 1976

SUBJECT

MILITARY THOUGHT (USSR): The Air Forces in Operations with the Employment of Conventional Means of Destruction

SOURCE Documentary

Summary:

The following report is a translation from Russian of an article which appeared in Issue No. 3 (76) for 1965 of the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal "Military Thought". The author of this article is Marshal of Aviation S. Krasovskiy. This article examines aviation capabilities and the problems of allocating air forces in conventional operations in which escalation to nuclear actions is threatened. The author defines the tasks of long range and front aviation, which exceed their capabilities, and recommends changing the relative proportion of types of aviation and determining the relative importance of the tasks they are assigned. The problems of control are examined briefly from the standpoint of maintaining readiness for nuclear actions during a conventional operation.

End of Summary

50X1-HUM

Comment:

Marshal Stephan Akanovich Krasovskiy was Commandant of the Red Banner Air Forces Academy i/n Zhukovskiy from 1956 to 1968. The SECRET version of Military Thought was published three times annually and was distributed down to the level of division commander. It reportedly ceased publication at the end of 1970.

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The Air Forces in Operations with the Employment of Conventional Means of Destruction

by

Marshal of Aviation S. Krasovskiy

Analysis of the character of the exercises of the armed forces of the US and of their aggressive actions in various areas of the world bears witness to the fact that our probable enemies, along with preparation for nuclear war, are also actively preparing to conduct military actions with the employment of conventional means of destruction. This circumstance requires us to study the nature and methods of conducting such military actions, to determine the role and special features of employing the branches of the armed forces in them, and, naturally, to work out practical measures for the training of the troops.

In this article, the intention is to examine certain basic positions about the use of the air forces in operations employing conventional means of destruction under the constant threat of the non-nuclear war escalating into a nuclear one.

Depending on the conditions of unleashing and conducting war with the employment of conventional means of destruction in various theaters of military operations, the role of each branch of the armed forces, including the air forces, will be different.

Obviously, the strategic rocket forces under these conditions will be in constant readiness to fulfil those tasks which are assigned to them in a nuclear war, and they will not be able to deliver strikes against the major groupings of ground troops, the aviation, and the rear installations of the enemy in a theater of military operations.

The ground forces, under conditions of employment of conventional means of destruction, will be the basic force for destroying enemy groupings in offensive operations. An especially important role, obviously, will belong to the tank troops. As regards operational-tactical missiles, they will basically be in readiness to employ nuclear weapons and, as a consequence of their low effectiveness with conventional warheads, they will not be able to offer substantial support to the troops of the front. The main role in fire neutralization and destruction of the important enemy targets in the conditions under consideration will obviously belong to the artillery.

The air forces, having the main part of the forces of long range aviation in readiness for employing nuclear weapons, will develop -- employing front aviation and part of the forces of long range aviation -- aggressive actions, jointly with the ground forces and the navy, to defeat the groupings of means of nuclear attack, aviation, and troops in land and sea theaters of military operations. Military transport aviation, as in a nuclear war, will carry out the landing and shipment of troops, cargo, and combat equipment in support of all the branches of the armed forces.

The air defense forces of the country, employing mainly the forces of front-area large units and formations, will carry on combat with tactical and carrier-based aviation, inasmuch as the enemy obviously will not start to employ strategic aviation and strategic and operational-tactical missiles with conventional warheads. Destruction of tactical aviation in the air will be carried out in close cooperation with front fighter aviation.

The navy, having its main forces in readiness to employ nuclear weapons, will, with part of its forces, carry out aggressive combat actions on the seas employing conventional means of destruction to destroy chiefly the aircraft carrier and missile-carrying forces of the enemy navy.

The scope of armed conflict with conventional means and, consequently, the degree of participation in it by the air forces will, obviously, be determined by the political and strategic situation which has taken shape by the beginning of and during the course of military actions in this or that theater.

It must be expected that, in the Western theater of war, where the groupings of the ground forces, the navy, and aviation are already formed, armed combat may acquire the greatest scope. It is precisely here that front aviation, long range aviation, and military transport aviation will find widespread employment. By virtue of the decisive goals which the warring sides will be pursuing, the switch to employment of nuclear weapons in this theater may be implemented considerably earlier than in other theaters of military operations.

Combat actions without the employment of nuclear weapons in secondary theaters, because of the limited goals, probably will involve separate areas and strategic axes and can be conducted with relatively small forces over a longer time. As a result of the fact that the necessary groupings of troops will be formed during the course of armed conflict, it can be assumed that with the beginning of combat actions long range aviation and

50X1-HUM

military transport aviation will find wider employment in these theaters.

Thus, from an analysis of the character of armed combat, it follows that, with the employment of only conventional means of destruction, the air forces will conduct aggressive combat actions on a large scale to destroy and neutralize the land, sea, and air enemy. In case of simultaneous initiation of such actions in several theaters, the main efforts of the air forces will be concentrated on the main one, the Western Theater of Military Operations.

Here, in view of the fact that the operational-tactical missiles of the ground forces basically will be in readiness to employ nuclear weapons and the range of artillery fire is limited, front aviation will find the widest employment. Under such conditions, it alone will be capable of delivering effective strikes to the full depth of the operational disposition of the enemy troops.

The actions of aviation employing only conventional means of destruction will have much in common with what theory and combat practice in the Great Patriotic War produced. At the same time, one must not mechanically transfer the experience of that war to the conduct of combat actions by aviation under modern conditions.

This position is explained, first of all, by the change in the qualitative status and the quantitative strength of the air forces; secondly, by the availability of nuclear weapons in the armed forces, the possibility of employment of which must be taken into consideration every moment in the conduct of war with conventional means; and, finally, by the increased strength of the enemy air defense system.

Let us briefly examine the factors mentioned.

The aviation equipment which is in service with the air forces generally meets the requirements for conducting combat actions employing both nuclear and conventional weapons.

The range and duration of flight of the aircraft of front aviation and long range aviation ensure actions against distant targets and permit increasing the duration of remaining over a target or in an airborne alert zone. It is becoming possible to base aviation at a great distance from the front line and to concentrate the efforts of air units and air large units on the necessary areas and axes without preliminary airfield maneuvering.

Subunits of fighter-bombers and front aviation bombers flying at low altitudes are capable of delivering strikes at a depth of up to 200 to 400 kilometers. At high altitudes, the depth of actions increases by 200 to 300 kilometers. Such ranges of the aircraft of front aviation fully ensure hitting the main groupings of missiles and ground troops of the enemy in the Western Theater of Military Operations. However, it is not capable of action against a grouping of enemy tactical aviation at the full depth of its basing, especially when flying at low altitudes. This shortcoming can be successfully compensated for by long range aviation, whose capabilities in range permit delivering strikes on any enemy target situated in this theater of military operations.

The increase in the flying speed of aircraft, especially at low altitudes, guarantees rapidity of action against newly detected important enemy targets and facilitates successful negotiation of the enemy air defense not neutralized by nuclear weapons. At the same time, with the increase in speed, the search for and detection of small-size targets and their destruction by conventional means of destruction are becoming complicated.

The armament of aircraft has become more powerful and diversified. It is capable of hitting any of the land, sea, and air targets of the enemy. The effectiveness of the armament of aircraft, especially of front aviation, it appears to us, can be substantially increased by installing on aircraft rapid-firing aerial cannon, including in the unit of fire guided missiles of the air-to-ground type, adopting standardized containers that allow for employment of diversified means of destruction, and also by further improving aiming and navigational equipment.

On the whole, the qualitative change in the aircraft inventory of the air forces has led to an increase in the capabilities of the units and large units of the different types of aviation to fulfil tasks using conventional means of destruction.

In determining the quantitative strength of the air forces that can be allocated for actions with conventional means of destruction, it is necessary, in our opinion, to take into consideration the following two circumstances.

The threat of employment of nuclear weapons makes it mandatory to reserve part of the forces of front aviation and long range aviation on a constant alert status in readiness for delivering nuclear strikes. For this purpose, as calculations show, there may be allocated, from front

aviation, up to 30 percent of the front fighter-bombers and bombers, and up to 50 percent of the front cruise missile launchers, and from long range aviation, about two-thirds of its forces. Consequently, combat actions with conventional means of destruction could be conducted by about 70 percent of the strength of front aviation and 30 percent of long range aviation.

The other important factor is the strong enemy air defense, not previously neutralized by nuclear strikes, in which substantial changes have taken place since the Great Patriotic War. The increased effectiveness of the modern air defense of the enemy will lead to an increase in aircraft losses and, consequently, will require the allocation of larger forces both for the destruction of each individual target and for combat with the forces and means of air defense.

Calculations performed in conformity with the conditions of a front offensive operation conducted with only conventional means of destruction show that the most favorable conditions for conduct of the combat actions of aviation are brought about with probabilities of 0.8 to 0.9 of negotiating the enemy air defense. However, such probabilities can be attained only with the simultaneous action of a considerable number of aircraft groups and with 60 to 80 percent neutralization of the fire system of enemy surface-to-air missiles, for which, as calculations show, it is necessary to allocate about 30 percent of the forces and means being planned for the operation.

It is evident from this that all those measures to combat air defense which are carried out in nuclear war take on even greater significance with the employment of only conventional means of destruction. At the same time, the allocation of considerable forces to neutralize it will lead to a corresponding reduction of the number of aircraft of front aviation and long range aviation that can be allocated to conduct combat actions with conventional means of destruction in support of the operations of the ground forces and the navy.

Consequently, given the relatively low strength of front aviation and long range aviation designated for the accomplishment of tasks in war with the employment mainly of nuclear weapons, a relatively small quantity of aviation, obviously, can be allocated for actions under conditions of conducting war with only conventional means.

What tasks can the air forces accomplish under the conditions being examined?

Analysis of the possible nature of the actions of the ground forces and naval forces shows that such tasks can be:

-- for front aviation: destruction of detected operational-tactical means of missile/nuclear attack and part of the forces of tactical aviation on the closest airfields; participation in preparatory fire and air support of troops on the offensive; destruction and neutralization of enemy reserves in their concentration areas and on the move; cover of troops and installations of the rear of the front against aviation strikes and aerial reconnaissance; conduct of aerial reconnaissance;
-- for long range aviation: destruction, at the depth of the main forces, of tactical aviation on basing airfields and of Mace cruise missiles in launching areas. Besides this, long range aviation can be allocated for actions against enemy reserves in areas of concentration and unloading from various types of transport, and also against man-made structures on land transportation routes.

Long range aviation will accomplish the indicated tasks employing both the forces which are allocated for actions directly in support of the troops of the front and the forces operating in support of armed combat in the theater as a whole.

The actions of the warring sides with only conventional means of destruction leave their imprint on the nature of the tasks and the scale of employment of military transport aviation. As a consequence of less disruption of ground lines of transportation, the need for its mass employment for delivery of materiel to troops is reduced. The necessity of using transport aircraft for mass transportation of the sick and wounded also disappears. However, as a consequence of constant enemy actions against our means of nuclear attack, one of the important tasks of transport aviation continues to be delivery of missiles, nuclear warheads, and missile propellant from the interior of the country. Reducing the expenditure of forces on shipments and also on support of the maneuvering of troops will allow concentrating the main efforts of transport aviation on accomplishment of such a task as the landing of airborne forces.

The volume of tasks of front aviation and long range aviation is characterized by that quantity of targets against which they have to act in the course of an operation.

Analysis of a front offensive operation shows that if, during preparatory fire in the breakthrough sectors, the fire means of the troops of the front can neutralize up to 40 to 45 percent of the important and especially important enemy targets, in the course of the operation during fire support their capabilities fall to neutralizing 20 to 25 percent of such targets, and the number of targets not hit correspondingly rises from 55 to 60 percent to 75 to 80 percent.

Thus, 55 to 80 percent of those enemy targets which must, to some degree or the other, be subjected to fire action in the course of the operation may become the responsibility of the front aviation and long range aviation allocated for actions in support of the troops of the front.

And what are the capabilities of front aviation and long range aviation for hitting the indicated number of enemy targets?

If one proceeds from the composition of an air army in the Western Theater of Military Operations accepted as standard in the practice of the operational training of the troops (two fighter air divisions, one fighter-bomber air division, two to three bomber air regiments, one cruise missile air regiment), then it can, in the course of three to five days of an offensive operation, considering losses and without replacements, destroy and neutralize about 30 to 40 percent of those important and especially important enemy targets which are not hit by the fire means of the ground forces.

Allocating long range aviation (not more than one air division) for actions in the zone of the front will, on the whole, permit inflicting substantial hits on about half of those enemy targets which may be assigned to front aviation and long range aviation.

So, the same difficulty confronts aviation as in nuclear war: the volume of tasks exceeds its combat capabilities.

Increasing the combat capabilities of front aviation, considering that allocating larger forces of long range aviation obviously will not be possible, can be achieved both by increasing the strength of the air army of the front (in comparison to that indicated above, but within reasonable limits) and by changing the relative proportion of the different types of aviation in it.

Turning to the question of the strength of the air army and the relative proportion of the types of aviation, it is not without interest to

recall the experience of history. In the Great Patriotic War, with the poorer state of aviation means of destruction, we had a considerably larger air army, and the proportion of strike forces of front aviation (bombers and ground-attack aircraft) exceeded the proportion of fighter aviation (by mid-1944 its proportion came to about 47 percent). In the enemy air defense means at that time, fighter aviation predominated, and the effectiveness of conventional antiaircraft artillery was not high.

With the existence of air supremacy (1943) and superiority over the enemy in aviation strike forces, front aviation was capable of successfully accomplishing the overwhelming number of tasks in front operations, supporting the ground forces in destroying hostile enemy groupings.

A different situation, it appears to us, may develop under modern conditions in conducting combat actions with only conventional means. Calculations show that, in quality and quantity of strike forces (bomber and fighter-bomber aviation), our front aviation is inferior to the tactical aviation of the enemy, but at the same time superior to it in fighter aviation. If one considers that the basis of the enemy air defense consists not of fighters but of highly effective surface-to-air missile means, then it becomes clear that the front aviation is not capable of fully satisfying the increased requirements of the ground forces for its actions in operations conducted with the employment of conventional means of destruction.

Also to be reckoned with is the fact that, for a number of reasons, by the moment military actions are begun we will not have in our air forces that quantity of aviation which would ensure fulfilment of all the possible tasks confronting aviation in operations with the employment of conventional means.

In such a situation, in order to achieve decisive success of the actions of the front aviation and long range aviation in supporting the ground forces and the navy in the operations being carried out by them, in our opinion, it is necessary first to assign to aviation the most important tasks, the fulfilment of which would, to the greatest degree, support successful conduct of the operations;second, to determine in fulfilling each task the main targets, those which by being hit would cause the greatest harm to the enemy; and third, to determine those axes in the operation where it is necessary to concentrate the main forces of both front aviation and long range aviation.

50X1-HUM

In determining the degree of importance of tasks for the aviation, it is absolutely necessary to consider the effect of their fulfilment on the course of the operation not only in the period of conducting it with conventional means of destruction but also mainly in the time when it has to be conducted with the employment of nuclear weapons.

Hence, the first and most important task of front aviation and long range aviation should be considered to be destruction of the enemy means of nuclear attack so as to maximally reduce his capabilities to employ nuclear weapons. In connection with the limited strength of aviation forces, their main efforts are advisably directed toward hitting the enemy tactical aviation on basing airfields and the Mace cruise missiles as the primary means of the enemy for employment of nuclear weapons, and also the operational missiles (Pershing, Sergeant).

This task retains its paramount importance for the duration of the entire operation. In order to fulfil it, as calculations show, it is advisable to plan to allocate up to 25 percent of the flight resources of the fighter-bombers and up to 60 percent of the flight resources of the front bombers, taking into consideration that enemy means of nuclear attack will be destroyed during the conduct of air support. As regards long range aviation, it will probably allocate not less than 60 to 70 percent of its flight resources to fulfilling the task of destroying means of nuclear attack.

Considering the capabilities for negotiating the system of air defense, the tactical flight radiuses of the aircraft, and also the grouping of enemy means of nuclear attack in the Western Theater of Military Operations, the efforts of the aviation may be distributed in the following manner.

Long range aviation destroys the delivery aircraft of the tactical aviation on the airfields to the full depth of its basing and the Mace cruise missiles in launching areas; front aviation, with part of its forces, destroys the tactical fighters on the airfields closest to the front line, and, with its main forces, destroys the operational missile units in concentration areas, waiting areas, and on the move.

The degree of importance of the other tasks will be determined by the situation in the course of combat actions. However, analysis of the fire capabilities of the artillery and rocket troops of the front shows that in operations with the employment of only conventional means of destruction, such a task as air support of the ground forces takes on especially great

significance.

Insufficient fire action against the enemy in the period of preparatory fire because of the limited strength of artillery means probably will cause an increased requirement for air support of the first echelons of the divisions right away when they go over to the attack. In order to carry it out, the air army must have the appropriate forces and means at its disposal.

In carrying out air support, in view of the relatively short range of artillery fire and the decrease in its intensity as the troops move forward, the actions of aviation, unlike in nuclear war, must be brought nearer to the advancing troops. This, in turn, increases the responsibility of both combined-arms and aviation commanders for organizing and implementing cooperation, especially in distributing the targets of actions between artillery and aviation, identification marking of troops, and mutual target indication.

Besides the means of nuclear attack, first-priority targets for destruction during air support will be those which can offer or are offering the greatest opposition to our advancing troops and which cannot be neutralized successfully by artillery means. For fulfilment of this task, considering its importance, it is advisable to allocate not less than 50 to 60 percent of the flight resources of the fighter-bombers.

The actions of the aviation in operations of the ground forces both in nuclear war and with the employment of only conventional means of destruction must be concentrated on those main axes where the main tasks are being accomplished to defeat the opposing enemy groupings. The most decisive massing of aviation forces and means must, in our opinion, be carried out on the axis of the main strike. Only in this case, considering the limited capabilities of the aviation, can the necessary superiority over the enemy be achieved and the fulfilment of the most important tasks in the operation be ensured. Obviously, such massed employment of aviation must be carried out primarily in support of the armies operating in the first echelon of the front. In order to strengthen the support of advancing troops in crisis moments of the situation, it is necessary to have, in the hands of the commander of the front (air army), the appropriate reserve of forces of fighter-bomber and bomber aviation.

Obviously, in the questions of massing aviation on the axis of the main strike in an operation, it is necessary to consider the experience of the Great Patriotic War quite thoroughly.

In conclusion, let us dwell on the questions of control.

Control of all the branch arms of the air forces (front aviation, long range aviation, and transport aviation) under the conditions being considered must be organized and implemented in such a way as to ensure their constant combat readiness for the employment of nuclear warheads and to avoid losses of aviation with a sudden enemy employment of means of mass destruction.

The content and overall tasks of control with the employment of conventional means of destruction do not differ in principle from its content and tasks in nuclear war, though they do have certain special features.

In the period of preparation and during combat actions, the amount of work of formation commanders (commanders) and their staffs is considerably increased, inasmuch as they will have to decide the questions of control of air units and air large units according to two variants of actions. As a consequence of this, in the process of control of large units and units are noted, as it were, two closely interconnected, but fairly independent, directions in the work of the command and staffs. One direction is connected with controlling that part of the forces of aviation which is conducting combat actions with the employment of only conventional means of destruction, and the other with controlling the forces that are in readiness for actions employing nuclear means of destruction.

In both cases there will be required continual acquisition of data about the situation, the adoption of new decisions and refinement of previously adopted ones, getting them to the executors, and all-round support of combat actions. Therefore, for controlling that part of the forces of aviation which is in readiness to employ nuclear weapons, it makes sense to establish special groups of generals and officers in the staffs of the air armies and of the large units of long range aviation (heavy bomber air corps). It is desirable to test the advisability of this measure in exercises.

The system of control of the air formations, air large units, and air units, in our opinion, should not undergo changes. Along with this, we do not share the opinion, ostensibly in connection with the considerable decrease in the rates of advance of the ground forces, that the change of control posts may be carried out considerably less often than in nuclear war. This point of view, in fact, extends not only to the change of control posts, but also to the regrouping of aviation, relocation of rear

units and facilities, etc.

The weakness of the position of the proponents of this point of view consists in the fact that they leave out of consideration the possibility of a non-nuclear war escalating into a nuclear one. The constant threat of the employment of nuclear weapons by the enemy obliges us not only to maintain and keep our nuclear weapons in constant readiness for employment but also to protect from strikes of enemy means of mass destruction all the other aviation forces and means, including the system of control.

So, changing the control posts of all levels of command, regrouping air large units and air units, relocating rear units and facilities, and so forth, must be carried out no less often than under conditions of nuclear war.

From all that has been said, one may draw the conclusion that the role of the air forces is considerably increased in operations conducted with conventional means of destruction but with the constant threat of the employment of nuclear weapons. They are the only means of neutralizing and destroying various targets and groupings of troops of the enemy beyond the maximum range of our artillery means. Participating in the operations of the ground forces, the air forces fulfil a large set of various tasks, including tasks which under the conditions of nuclear war are assigned to strategic and operational-tactical missiles. The most important principles in the employment of the air forces in operations conducted with conventional means of destruction are the massing of forces and means, the concentration of efforts of aviation in support of the main grouping of troops, and, what is especially important, maintenance of part of the forces of aviation in constant readiness to employ nuclear weapons.

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